

In re Application of Rahman et al.
Application No. 10/717,378

REMARKS/ARGUMENTS

Claim Amendments

Claims 1 and 11 have been amended to describe a liposomal irinotecan formulation wherein the plasma concentration (Area Under the Curve) for the formulation is 200-fold higher than that of conventional irinotecan. These amendments are supported in the disclosure as originally filed in original claim 4. Claims 5, 9, and 13-16 are amended to more clearly describe the invention. Claims 4, 10, 22 and 24-46 are canceled. These amendments are supported by the disclosure as originally filed, and no new matter is added by way of these amendments.

Office Action

The Office Action rejects claims 24-45 for double patenting over claims 153-238 of the copending application 10/424,258 ('258). The Office Action also suggests that claims 24-32, 34-38, and 40-44 lack novelty in light of WO 95/08986 ('986). In addition, the Office Action suggests that claims 33 and 45 are obvious in light of '986 and US 2003/0215492 ('492), US 6,146,659 ('659), or US 5,648, 090 ('090). The Office Action alleges that claim 39 is obvious in light of '986. Furthermore, the Office Action suggests that claims 1-9, 11-21, 23 and 46 are obvious in light of '986 in combination with the Sadzuka 1998 article or the Sadzuka et al. 2000 article. In addition, the Office Action alleges that claims 10 and 22 are obvious in light of '986, Sadzuka (1998 or 2000), and '492, '659 or '090. Also, claims 24-45 are rejected as allegedly anticipated by US 2003/0215492 ('492).

Discussion of Double Patenting

The Office Action rejects claims 24-45 for double patenting. While Applicants do not concede that the claims were properly rejected, claims 24-45 have been canceled. Thus, the rejection no longer applies.

Discussion of Novelty

Firstly, the Office Action suggests that claims 24-32, 34-38 and 40-44 lack novelty in light of '986. While Applicants do not concede that the claims were properly

In re Application of Rahman et al.
Application No. 10/717,378

rejected, claims 24-32, 34-38 and 40-44 have been canceled. Thus, the rejection no longer applies.

Secondly, the Office Action suggests that claims 24-45 are anticipated in light of '492. While Applicants do not concede that the claims were properly rejected, claims 24-45 have been canceled. Thus, the rejection no longer applies.

Discussion of Obviousness

Firstly, the Office Action suggests that claims 33 and 45 are obvious in light of '986 and '090, '659 or '492. While Applicants do not concede that the claims were properly rejected, claims 33 and 45 have been canceled. Thus, the rejection no longer applies.

Secondly, the Office Action suggests that claim 39 is obvious in light of '986 alone. While Applicants do not concede that claim 39 was properly rejected, claim 39 has been canceled. Thus, the rejection no longer applies.

Thirdly, the Office Action suggests that claims 10 and 22 are obvious in light of '986 in combination with Sadzuka (1998 or 2000), and '492, '659 or '090. While Applicants do not concede that the claims were properly rejected, claims 10 and 22 have been canceled. Thus, the rejection no longer applies.

Fourthly, the Office Action alleges that claims 1-9, 11-21, 23 and 46 are obvious in light of '986 in combination with the Sadzuka 1998 article or the Sadzuka et al. 2000 article. While Applicants do not concede that the claim 46 was properly rejected, claim 46 has been canceled. Thus, the rejection no longer applies to claim 46.

As respects claims 1-9, 11-21 and 23, the Office Action fails to establish some suggestion or motivation to combine the references so as to achieve a 200-fold higher area under the curve (AUC) of liposomal irinotecan (as recited in claims 1 and 11) than that of conventional irinotecan. It is the Office's burden to demonstrate such motivation to combine by objective evidence, but the Office has not met this burden. Moreover, the skilled artisan would not be motivated to combine the cited references to arrive at the invention recited in the pending claims, nor does the combination of the cited references, if actually made, result in the invention as claimed. In this respect, '986 describes liposomal camptothecins with cardiolipin listed as one of the nine lipids and irinotecan listed as one of eleven camptothecins. Sadzuka describes liposomal irinotecan with lipid

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Application No. 10/717,378

combinations of DMPC/cholesterol/DMPG (1998 and 2000) and DSPC/cholesterol/DMPG (1998). These combinations demonstrated only a 2.7 and 3.6 fold increase in AUC over conventional irinotecan. Coating the lipid with polyethyleneglycol (PEG) increased the AUC to merely 100 and 136. As demonstrated by the data in Sadzuka 1998, different lipid combinations impart varying degrees of AUC, however, Sadzuka fails to disclose or suggest a combination resulting in a 200-fold AUC increase. The Examiner suggests that the attributes of "cardiac tissue accumulation, the plasma concentration curve, and the plasma half life" are all suggested by '986, Sadzuka 1998 and Sadzuka et al. 2000. None of these references, however, either alone or in combination, provides any hint or suggestion to use the specific combination of irinotecan and cardiolipin thereby imparting the distinct advantage of a 200-fold higher AUC, as recited in claims 1 and 11. Accordingly, the cited references fail to suggest the invention as claimed in claims 1-9, 11-21 and 23, and the rejection of such claims should be withdrawn.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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